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10/068,664

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02/06/2002

First Named Inventor

Chuan Li

Art Unit

1636

Examiner Name

James S. Ketter

Attorney Docket Number

N/A

ENCLOSURES (Check all that apply)

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Amendments to application: DE NOVO SYNTHESIZED PLASMID, METHODS OF MAKING AND USE THEREOF

Applicant Name: Chuan Li

Date: January 18, 2007

Application/Control Number: 10/068,664

Art Unit: 1636

a.) Introductory Comments

These are amendments of application (Application Number: 10/068,664) filed on February 6, 2002.

The applicant provisionally elects Group VI to be examined. Group VI includes claims 26, 27, 28, 29, and 30 presented in the amendments filed on June 15, 2006.

The applicant disagrees with the requirement for restriction and request for reconsideration of the plasmids presented in the claims 26 to 40 to be examined in one group as a single invention. The applicant believes the disclosed plasmids are related. The reasons are following.

- (1). All disclosed plasmids are synthesized by same design. They are synthesized by using a replication origin and a selection marker gene with adaptor sequences. The starting materials to synthesize these plasmids are structural units of a plasmid and are not plasmids themselves. In contrast, all other plasmids are synthesized using existing plasmid as starting material. The application presented a new method of plasmid synthesis.
- (2). All disclosed plasmids are initially designed to facilitate protein co-expression for one purpose. Therefore they are synthesized together for same purpose. Later on they are found to be useful in other applications in addition to protein co-expression.
- (3). Some disclosed plasmids contain pMB1 (ColE1) replication origin. Others contain p15A replication origin. These replication origins belong to different compatibility groups and can co-exist in one cell (Page 1.3-1.5, Molecular Cloning A Laboratory

Manual, Sambrook et al, Cold Spring Harbor Laboratory Press, 1989). Therefore they can be used together.

(4). The application provides one example of a derivative p2CXL of disclosed plasmid p2C can be used together with another plasmid pET-15b-RAR-LBD to facilitate protein co-expression (EXAMPL 5). Since pETp15b-RAR-LBD has same replication origin and selection marker as p1A. Plasmids p1A and p2C should be used together. It has been demonstrated that a plasmid with one replication origin and selection marker can be used together with another plasmid with a different selection marker and a different replication origin as long as their replication origins belong to different compatibility groups. Therefore many of the disclosed plasmids can be used together.

(5). The 8 kb DNA fragment of our product DigiDNA50-15k is made from plasmids p3A and p4C. The 10 kb DNA fragment of our product DigiDNA50-15k is made from plasmids p3A and p4T. They are all used together in a DNA standard. These demonstrated that these plasmids can all be used together. Our product DigiDNA50-15k can be found at <http://www.exptec.com/DNA/DNApdf/DigiDNA50-15kbook.pdf>. The 8 and 10 kb DNA bands are shown in the figures.

All these evidences clearly demonstrate that the plasmids disclosed in the application are synthesized by same design, with same method and for same purpose. Many of these plasmids can be used together. Therefore the applicant requests reconsideration for the plasmids presented in the claims 26 to 40 to be examined in one group as a single invention.